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THE PHYSIOLOGICAL AND THERAPEUTIC RELATIONSHIPS OF ERGOT OF RYE.*

A Thesis for the Degree of Doctor of Medicine; and to which was awarded the First Prize of the Boylston Medical Society for 1869.

By FRANK W. DRAPER, M.D.

ONE of the first embarrassments which the student of medicine meets, and that almost at the outset of his course, is the great number and variety of the remedies presented, in the Materia Medica, for his study and use. The implements of his profession confuse him, alike by their multiplication and their complexity. From all regions of her great domain Nature gathers her remedial stores, and offers them, with profligate generosity, to him who will choose to employ them. Chemistry adds new products, and pharmacy evolves changes without number.

This unlimited variety, characterizing the Materia Medica, it is the tendency of the present medical generation to modify. Simplicity of treatment is now deemed more rational than studied complexity, and all the innovations which this century has witnessed are marked by this tendency. As compared with the customs of the fathers, the opposite extreme seems almost reached in a proper zeal in behalf of the restorative power of Nature. The professional verdict declares for the use of a limited number of remedies which are well understood, and bases its dictum on the revolutionized sentiment with regard to the treatment of disease. It is to the renewal of life that our remedies are to be directed, not to the exorcism of disease. Hence comes the dogma of expectancy. The natural history of diseases is more carefully observed and better understood, and men see that nature may be guided and aided, but not forced.

As the direct result of this advancement, come more rational methods of study into the intimate nature and relationships of the means to be used for the accomplishment of the end in view. It is part of the business of modern science to examine carefully into the processes which individual drugs produce, to see what virtue may be in them, to take them out of the hands of empiricism, and to apply them, on well-established principles of action, to the treatment of disease.

It is proposed, in this paper, to present some of the more recent views of the physiological and therapeutical relationships of a pathological product of the vegetable kingdom—the secale cornutum.

The use of ergot as a therapeutic agent is by no means of modern date. Although there is no evidence that it was employed by the ancients, or that they recognized its virtues, it is well authenticated that scientific men of the middle ages were not ignorant of its powers. As early as A.D. 1096 it was mentioned and described by medical writers, and at a still earlier period its efficacy, under proper conditions, as a parturifacient, was known by the continental midwives and empirics.

It was not, however, until the middle of the last century that physicians consented to admit ergot into the list of the legitimate materia medica, and this recognition, at so recent date, was attended with even considerable difficulty. Its use was interdicted in France in 1774; but it was again introduced soon after, on this occasion with favor and with the royal seal of professional recommendation. Like most remedial agents, however, its success was variable until it could outlive the prejudicial conditions of novelty and the want of extended trial; and for half a century after its introduction among regular practitioners it was hardly heard of. But at the beginning of the present century, it fell to the lot of an American to put the use of ergot on a permanent basis as a therapeutic agent, and the name of Dr. Stearns, of New York, is thus associated with its early history. Since this time it has constituted a subject for scientific discussion of very great importance. Writers upon its powers have mul-

* Prof. E. H. Clarke specially recommended this paper to us for publication, and it was furnished at our solicitation.—ED.

tiplied, until the bibliography pertaining specially to ergot has acquired almost indefinite proportions. Its chemical composition, its natural history, its mode of action, its therapeutic uses and abuses have been made the subjects of inquiry, resulting in the most diverse opinions concerning its powers, its virtues and its ill effects. As has been the case with many, perhaps with most, of the really valuable remedial agents in their primitive history, ergot was thus in danger of an early decline, both in consequence of the disastrous effects resulting from its abuse in inexperienced hands, and as the result of the violent partizan opinions to which its use gave rise. In the light, however, of the best modern experience, developed from the skilful observations of such men as Parola, Bonjean, Wright and Brown-Séquard, this article properly assumes a place among the agents placed at the disposal of mankind for the relief of suffering, and it is thus rescued from the abuses of empiricism, since its manifold and often apparently contradictory indications are made to rest on a rational physiological and pathological basis.

Into the consideration of the general character, the mode of growth, and the botanical relationships of ergot, it is not proposed to enter in this paper. The chemical constitution, moreover, is as yet a vexed question among pharmacists; new constituents are discovered and urged as the active principles, and new characters serve to confuse the already accumulated mass of chemical facts.

Leaving, then, the study of the natural history and of the chemical constitution of ergot, we pass at once to the discussion of its physiological and therapeutical effects. For the more systematic consideration of its powers, it is proposed to adopt the plan as illustrated in the examination of kindred topics (Prof. E. H. Clarke's Lectures on the Materia Medica), and to investigate, in turn, the absorption of ergot, its passage through the system, the effects during its passage, its *modus operandi*, and, finally, the therapeutic uses and indications.

Absorption.—It is sufficiently clear that the active principle or principles of the secale cornutum must first be introduced into the system, by the circulation, before the well known and most obvious effects can manifest themselves. Experiments are numerous to prove that the specific action can take place only through this medium. When ergot is applied artificially to any part not in direct communication with the circulatory system, its action, so far as known, is neutral, or at best but negative. Nor is there reason to suppose that we have any subtle narcotic principle, which by sympathetic nervous transmissibility or by reflex action affects parts at a distance from each other, as some authorities suppose to be the case in tartar emetic or in some of the active poisons. But we are justified by the strongest analogy in placing ergot with the very large class of medicines which must "obtain entry into the blood or internal fluids of the body before their action can be manifested."—(Headland on the Action of Medicines, p. 59.) Chemistry, too, although as yet in a crude and imperfect manner, assists in the demonstration of the absorption of ergot, its presence in the blood having been determined by Wright, in 1840.

The action of ergot is essentially the same, by whatever avenue of absorption it reaches the blood. Applied locally in external hæmorrhage, as in epistaxis, its action is still the same as when it is exhibited by the more indirect process of absorption in the stomach; by its vital action on the bloodvessels, instead of its chemical effect on the blood, it claims a place "in the first rank of liquid hæmostatics which do not coagulate the blood, its action being wholly dynamic."—(Bonjean, "Ergotine," p. 11.) It has also been found that when the drug is administered by the rectum in the form of suppository, or as an enema; by the vagina, or by any of the mucous surfaces, absorption, although slow, is certainly followed by positive results, distant as well as local. Nor must it be forgotten that equally with other media of absorption, the stomach, obviously the most ordinary and convenient organ for the process, presents the active principle of ergot to the blood, with a consequent ready manifestation of effects identical with those produced after administration through other tissues. The numerous experiments of Wright have demonstrated, also, that the effects of the drug are the same on animals, whether it be presented directly to the blood by injection into the large veins, or indirectly by osmosis.

Another, but less obvious confirmation of the absorption of spurred rye is found in the effect of the drug in certain cases on the fœtus in utero. In discussing the use of this agent in parturition, Dr. Beatty (Contributions in Midwifery—art. Ergot) remarks that children, still-born after the exhibition of ergot to the mother in labor, vary very much in their condition and appearance from those born dead under

ordinary circumstances, and he attributes this difference not only to the mechanical causes, but, in many cases, "to the noxious influence of ergot exerted on the nervous system of the infant" through the mother. The distinguishing characteristics of the former state he indicates as follows: "general lividity of the surface, universal rigidity of the muscular system, producing the stiffened limbs and clenched hands in those infants in which life was extinguished, and the remarkable kind of alternating spasm and palsy which supervened in those which were resuscitated." These differential phenomena occurred, according to this author, after sufficient time had elapsed, in each case, to permit the influence of the ergot to permeate alike the maternal and the fœtal systems. It is not difficult to trace a marked analogy between the symptoms of ergotism thus manifested in the child, and the effects produced under ordinary physiological conditions, to be hereafter described.

The time occupied in the absorption of ergot through the healthy mucous membrane and tissues of the stomach, before it reaches the blood, is variously estimated. That it is rapidly taken up, under favorable conditions, is sufficiently clear. Thus it is stated by Churchill (Midwifery, p. 263) that sixty grains of the powder of ergot administered in tedious labor, will manifest effects in from five to ten minutes, "the pains becoming stronger, longer and more frequent." In experiments reported by Parola (Bibliothèque du Méd. Pract., p. 218) symptoms referable to the action of spurred rye were observed in a healthy adult male in two hours; and again in experiments on himself, nausea, headache, general lassitude and other indications of ergotism manifested themselves in one hour after taking fifteen grains of the powder. "Arnal's numerous experiments showed that the action of a drachm of ergot commenced within an hour." (Stillé—Therapeutics, vol. ii. p. 586.) Gubler states (Commentaires Thérapeut. p. 112) that "after an interval of ten minutes the characteristic phenomena of this convulsive poison may be seen to exhibit themselves." Upon animals the effects are much more rapid and decided. Well marked symptoms appear in from five to ten minutes, in the case of dogs, after the ingestion of large doses of ergot in powder. (Wright, op. cit.)

Of the changes which the drug undergoes in the stomach, before absorption, by which only the active and assimilable portion is selected, while the rest is rejected to be passed on through the intestines, we have no demonstration. Nor is it positive that the stomach is alone engaged in the process of elaboration and of absorption; it is tolerably certain, indeed, that the extensive mucous tract of the intestines, containing myriads of absorbents, may have some share. Whether, in this process, the tissues engaged in osmosis are subjected to any local effect, is also a question yet to be decided. It seems clear, however, that no positively irritant effect is produced, and that whatever local changes result, are only transitory and unimportant. "If the dose is sufficiently large, the subject is not slow in experiencing nausea and vomiting, which may be considered as symptoms of a promptly generalized action." (Gubler, loc. cit.) Applied externally to the skin, ergot does not appear to produce any sensible effects whatever, but if placed on an abraded surface it gives rise to profuse sloughing, the ulcers formed producing an abundant and offensive purulent discharge, and proving very slow to heal. (Wright, *Edin. Med. and Surg. Journal*, vol. liii. p. 8.)

There are, of course, conditions by which the absorption of this, in common with all drugs, is essentially modified. For example, the state of the system in general, whether of stimulation or of depression, the amount of the dose, the degree of its dilution when administered or subsequently in the stomach, depending on the relative fulness of that viscus, the idiosyncrasy, age, or habits of the patient, and, finally, the relative health of the medium of absorption, are all modifying conditions so obvious, and of such general application, that they need no extended discussion.

Passage through the System.—Once in the blood, the efficient constituent principles of ergot are conveyed by that fluid to every part of the system, thus exercising their legitimate effects everywhere, and giving rise to characteristic phenomena of action. What becomes of the drug in the passage through the system, whether its elements are resolved chemically, and used up in the blood, or are eliminated as they were absorbed, are questions yet open for solution. The experiments of Wright appear to indicate the presence in the blood of the oil of ergot, which Bonjean deems the poisonous element, but concerning the ultimate fate of this and of the other principles we are not yet enlightened. Nor do we know that any of the ordinary emunctories are concerned in the act of elimination. No increase of the secretions appears to indicate

the process, as is so plainly demonstrated with other agents, and we do not find functional or organic changes in the glands other than those referable to the general action. It has, however, been observed that the perspiration acquires a perceptibly sour odor after the injection of ergot. (Wright.)

We are equally uncertain concerning the time occupied by the processes of absorption and elimination, all observations being approximative only. Thus in labor, according to Trousseau and Pidoux (*Thérapeutique*—art. Ergot), the duration of the action of the drug varies from half an hour to an hour and a half. Prescot, after an analysis of fifty-nine cases, fixed the average duration of the effects at "an hour and a little more." But these sensible effects on the gravid uterus, although more obvious than phenomena developed elsewhere, do not probably indicate the only influence, or its actual extent and duration, while the cumulative effect is sufficiently shown by the symptoms in chronic ergotism, as well as by those pertaining to the nervous centres in the ordinary exhibition of the drug.

Effects on the System.—Experiments in this direction are reported in great numbers, although the results attained are essentially the same. A single observation recorded by Parola (*Bib. du. Méd. Pract.* p. 218) will suffice in illustration. "A single man, aged 24 years, tall, slender, lymphatic and always healthy, took one gramme and a half of powdered ergot; his pulse being at the time sixty-seven, and his respiration twenty. Two hours after, he felt general depression, shivering throughout the body, coldness of the surface with 'goose-flesh,' illness at the epigastrium, loss of appetite; pulse sixty, soft and feeble; countenance pale; pupil dilated. On the day following, he took another dose, with the same effects somewhat aggravated; and during the next forty-eight hours, a feeling of debility, with slow pulse, and diminished respiration, showed the lasting depressing effect of the drug." Gubler (op. cit. p. 113) enumerates the symptoms of acute ergotism as follows:—"Nausea and vomiting, pain in the abdomen, alvine dejections, dryness of the fauces, thirst, aversion to food, itching of the limbs, numbness, lassitude, heaviness of the head, vertigo, dilatation of the pupils, delirium, drowsiness, stupor, rarely acceleration of the pulse, almost always, on the contrary, diminution in the frequency and force, tendency to syncope, pallor and lividity of the face." Nor must we forget the specific action of ergot, that for which it was first employed, whether empirically or regularly, and which has given it nearly all the distinction which it possesses—its effects on the gravid uterus.

Experiments on the physiological effects on animals give results no less striking and interesting than those above enumerated. The numerous observations of Wright gave symptoms almost constantly identical; dilated pupils, convulsions, rapid pulse, staggering, paraplegia, prostration, coldness of the surface, death. The prolonged exhibition of ergot produced analogous phenomena, differing only in degree of intensity.

[To be continued.]

A CASE OF HERPES ZOSTER OPHTHALMICUS, IN A PATIENT 80 YEARS OF AGE, CAUSING FATAL PROSTRATION; WITH REMARKS.

By B. Joy Jeffries, A.M., M.D., Ophthalmic Surgeon Mass. Char. Eye and Ear Infirmary, Boston, &c. &c.

(Continued from page 292.)

I think, very naturally, medical gentlemen may be inclined to doubt the correctness of my diagnosis in this case, or perhaps even the existence of so curious and sometimes so formidable a disease. I shall, therefore, in support of my views, take the liberty of here quoting gentlemen whose opinion and observation will be unquestioned. Mr. Jonathan Hutchinson, in the Royal London Ophthalmic Hospital Reports, says, of herpes zoster affecting one or all the branches of the ophthalmic nerve: "This most interesting disease has as yet received but little attention from writers on skin diseases, and, as far as I am aware, scarcely any from ophthalmic surgeons." "The disease is, I am persuaded, more frequent than is generally supposed. In proof of this I may mention that, during the last year, no fewer than three patients have consulted me in private on account of its effects. I have found most surgeons very incredulous as to this disease, and free in asserting that they had never seen it, and that it must be extremely rare. My conviction is that it is often misnamed. It is often considered to be erysipelas. Three patients who came to me with the unmistakable marks of herpes on one side of the forehead had been treated for a disease which had been said to be erysipelas, and several others in my series had also had a similar diagnosis given. Yet it is easy enough to distinguish the one from the other, if attention be once drawn to their differences. Herpes frontalis is always limited to one side—never transgresses the median line of the forehead and nose. It never affects the cheek, although there may

be some sympathetic œdema of the part (œdema of contiguity). There is less general swelling of the skin than in erysipelas, and in some cases very little. The vesicles of herpes are smaller, more defined, more numerous, and altogether much more conspicuous and pronounced than are the bullæ of erysipelas. There is much more pain and much less constitutional disturbance in herpes than in erysipelas. The strictly unilateral character of the one, contrasted with the irregular location of the other, is, however, the most reliable feature for the purpose of ready diagnosis." "Herpes almost invariably leaves scars, often deep ones, and by the arrangement of these (unilateral) it is usually easy to recognize a patient who has suffered from the disease, even years after its occurrence." In proof of this latter we would refer to a photograph and wood-cut in the Ophthalmic Hospital Reports given by Mr. Bowman, who there says in regard to ophthalmic shingles: "Cases of this nature have attracted my attention during many past years." "I have frequently seen this disease mistakenly called 'erysipelas,' even by accomplished practitioners. From this it is distinguished by the pain preceding the symptom, by the mingled numbness, pain, and heightened sensibility remaining for a long period after the inflammatory outburst, and especially by its not overpassing the median line." To show that these views are supported by absolute observations, I will here introduce a tabulated statement [see next page] of twenty cases of this form of zoster, collected by Mr. Hutchinson, and thirteen cases reported by Mr. Bowman, all occurring within the last few years. They certainly would seem to show that the complaint is not so very infrequent, and would be oftener noticed were it always diagnosticated.

About a month after I had reported my case and read this paper at the Newport meeting of the American Ophthalmological Society, 1868, the subject of herpes zoster ophthalmicus was introduced at the Heidelburg Ophthalmological Society by Dr. Steffan, of Frankfort. The report is so interesting that I here introduce what was said, translated from the proceedings of the society published in Zehender's *Klin. Monatsbl. f. Augenheilkunde.* Dr. Steffan: Frankfort.

"Allow me to call attention to the very interesting disease known as *herpes zoster frontalis, seu ophthalmicus,* which from ophthalmologists has been but lately properly noticed, by our English colleague Hutchinson. Since his remarks in the 5th vol. of the Opth. Hosp. Reports and Bowman's in the 6th vol., I do not know of any notice of herpes zost. front. in the French and German ophthalmic journals; and therefore, as also in consequence of the rarity of the disease, I think the following in place here. I had for the first time a case under my care the past summer.

An operative, æt. 36, who had always been well, applied to me with an already fully developed cutaneous eruption, the history of which before and after his appearance only completely confirmed the correctness of Hutchinson's observations. (Dr. Steffan then exhibited to the Society a photograph of this patient, taken after the disease had run its course, together with the photograph of Bowman's case, from the Oph. Hosp. Reports, and proceeded with the following description of the disease.)

The patient suffers for several days, even up to the ninth, the most intense neuralgic pain in the brow and head. Then a cutaneous eruption appears, i. e. the skin swells and becomes red. In some cases, firm, resisting spots are perceptible in the subcutaneous cellular tissue; afterwards, fine vesicles appear on the surface of the skin, in groups or plaques. The separate groups of vesicles become confluent, the contents, consisting of mixed blood and pus, dry up to a thick scab, and when these fall off deep scars are left, which last the patient's life-time, and remain a perfect proof of the disease having existed. From the announcement of the cutaneous eruption to its end, i. e. the formation of scars, is about three weeks. Even after the scars have formed, the neuralgic pain may continue in the parts affected in the most aggravated form, whilst the cutaneous surface itself feels numb and parchment like. The locality of the affection is distinctly marked out, that is, it affects only the portion of skin supplied by the first or ophthalmic branch of the trigeminal nerve—the forehead, upper lid, and nose to its tip. As we know, the first branch of the trigeminal divides at the fissura orbitalis superior, or before this, into three nerves—lachrymalis, frontalis and naso-ciliaris. The lachrymalis goes to the lachrymal gland and the neighboring skin of the upper lid. The frontalis, dividing into supra-orbitalis and supra-trochlearis, goes to the brow. The naso-ciliaris, which in connection with this disease mostly interests us ophthalmologists, gives off a *radix longa* to the ciliary ganglion, and some *nervi ciliares longi,* and then divides into the *infra-trochlearis* and ethmoidalis. The infra-trochlearis passes

MR. HUTCHINSON'S TABULAR STATEMENT OF 20 CASES OF HERPES ZOSTER FRONTALIS, SEU OPHTHALMICUS.—*Oph. Hosp. Rep.*, Vol. v., Parts 3, 4.

No.	Name—Date—Reference.	Age.	Health, premonitory symptoms, &c.	Parts affected.	Nerve affected.	Remarks.
1	Geo. Morgan, Ophthalmic Hospital, Sept. 9, 1861.	63	Florid; nearly bald.	Left forehead, upper eyelid, iris, side of nose to tip.	Whole ophthalmic division of fifth.	The eye inflamed, and was practically lost.
2	Mrs. Kimpter, Metropolitan Free Hospital, Dec. 17, 1861.	26	Very pale and feeble.	Left frontal region and mid region of side of nose.	Frontal and both trochlear branches.	Eye not inflamed.
3	William Woolgar, March 29, 1862.	3½	In usual health.	Right forehead and mid region of side of nose.	" " "	Eye not inflamed. Portrait by New Sydenham Society.
4	Joseph Bond, July, 1859.	56	Subject to bronchitis.	Left forehead.	Frontal division only.	Eye not inflamed. Shingles, also, at same time, right side of the chest.
5	A. B. Clerk, Ophthalmic Hospital.	25	In good health; ten days' premonitory pain, severe.	Left forehead.	" " "	Eye not inflamed.
6	Mrs. Barnes, Ophthalmic Hospital, June 9, 1863.	64	Pale and thin, but in good health; severe headache preceded, but not confined to the forehead.	Right forehead.	" " "	Not very severe case. Eye not affected at date of notes. No subsequent record.
7	J. Thomas, Ophthalmic Hospital, April, 1865.	17	Healthy sailor.	Forehead and side of nose.	Frontal, trochlear and oculo-nasal branches.	Notes imperfect, and do not state more than that there was not much mucous discharge from the eye.
8	J. Anderson, Ophthalmic Hospital, June, 1866.	69	Tailor, in good health. Had pain in part, and slight rigor the day before eruption came out.	Left forehead, side of nose, iris, cornea, &c.	" " "	Extensive opacities of cornea and posterior synechia. Pupil did not dilate to atropine.
9	Mrs. B., of Sutton, Bedfordshire.	68	A spare, but healthy lady.	Left forehead, side of nose, cornea, conjunctiva and iris.	" " "	Patient came month after attack, on account of the damage to the eye.
10	Mrs. M. Hertford.	66	A lady in rather feeble health, and with suspected renal disease.	Forehead, conjunctiva, side of nose, cornea and iris.	" " "	Patient came, as last case, on account of eye. Cornea hazy, pupil fixed, skin numb.
11	Mr. —— Hackny.	60	A very healthy man.	Left forehead, side of nose, conjunctiva and cornea.	" " "	Sent me on account of cataracts.
12	Dr. Markham.	46?	Good health.	Left forehead and side of scalp.	Frontal; eye did not inflame.	This accomplished physician was himself the patient.
13	A girl, London Hospital, Dr. Parker's case.	16?	. . . . .	Left forehead, side of nose and iris.	Frontal, trochlear and oculo-nasal branches.	Shown me by Dr. Woodman.
14	Danielssen and Boecks, Atlas of Skin Diseases.	65?	Good health.	Right forehead and side of scalp.	Frontal.	No inflammation of the eye.
15	Rayer's case, Man.	47	. . . . .	Left forehead.	Frontal division.	Eye not mentioned.
16	Dr. Broadbent, patient an officer.	23	Spare, but in good health.	Right forehead and side of nose, but not to tip.	Frontal and both trochlear branches.	The eye inflamed, and the cornea was slightly opaque.
17	A girl.	12	. . . . .	Forehead.	Frontal.	Eye not inflamed.
18	Mrs. ——, Ophthalmic Hospital.	60	Good health.	Right forehead and side of nose.	Frontal, trochlear and oculo-nasal branches.	The side of the nose chiefly affected. Complete blindness resulted.
19	Mr. Parker, Ophthalmic Hospital.	14	Strumous looking.	Left forehead, scalp and upper lid.	Frontal.	Mild course. No inflammation of the eye.
20	A. B., case of Mrs. Ransom, Bowd.	43	Good health.	Left forehead.	Frontal.	No vesicles on nose, and no inflammation of eye.
	A. B.	80	(My own case. B. J. J.), Good health.	Left forehead, scalp, lid, side of nose, eye.	All branches of ophthalmic.	Disease ran its course in 36 days; patient died from exhaustion on the 44th day.

MR. BOWMAN'S THIRTEEN CASES OF HERPES ZOSTER FRONTALIS, SEU OPHTHALMICUS.—*Ophthalmic Hospital Reports*, Vol. vi., Part 1.

No.	Name—Date—Reference.	Age	Health, premonitory symptoms, &c.	Parts affected.	Nerve affected.	Remarks.—Complications.
1	Miss B., Oct., 1855.	40	. . . . .	Right forehead.	Frontal.	Ophthalmia and corneitis in right eye, leaving nebula.
2	Miss H., 1860.	57	Had had inflammation of o. d.	Right forehead.	Frontal.	Corneitis and iritis in right eye, leaving dense nebula.
3	Mr. W., 1858.	36	Has had diplopia.	Left forehead.	Frontal.	Internal strabismus left eye; diplopia.
4	Mr. L., July, 1865.	70	. . . . .	Left forehead and scalp.	Frontal.	Conjunctivitis. Supra-orbital nerve divided; no permanent benefit.
5	Mr. S., Jan., 1864.	44	. . . . .	Left cheek and temporal region.	Submaxillary and frontal.	Atrophy of optic nerve, left eye.
6	Sam H., Nov., 1864.	55	. . . . .	Left side of head, cheek, nose and lids.	Frontal and nasal.	Corneitis leaving nebulæ, left eye. Supra-orbital and infra-trochlear divided; considerable relief.
7	Miss S., 1864.	60	. . . . .	Forehead, right.	Frontal.	Nebulous cornea, right eye.
8	Mrs. S., Sept., 1866.	52	. . . . .	Right forehead and infra-orbital region.	Supra-orbital and infra-trochlear.	Ulcers of cornea, iritis, right eye.
9	Ed. H., Nov., 1866.	70	. . . . .	Right forehead, temple and upper lid.	Frontal.	Thickening of lid, globe not affected.
10	Jos. Haynes, 1867.	4	. . . . .	Left forehead.	Frontal.	No affection of the eye.
11	Thos. Redburn, 1865.	9	. . . . .	Right forehead and upper part of nose.	Frontal and nasal.	Leucoma, right cornea (due to herpes?).
12	A. Turnbull, 1867.	12	. . . . .	Forehead (right?).	Frontal.	No vesicles on nose; eye not inflamed.
13	Anne Robins, 1867.	44	. . . . .	Right forehead.	Frontal.	" " "

over the ligamentum palpebrale internum to the orbit, and in connection here with the supra-trochlearis spreads upon the upper lid and the skin of the root of the nose. The ethmoidalis passes through the ethmoid opening transversely inwards to the inside of the skull, and then forwards on the lamina cribosa of the ethmoid bone, through the anterior foramen cribosum near the crista galli into the nostril, there dividing into three twigs, one of which comes out on to the skin of the top of the nose from between the under edge of the nasal bone and the cartilage. The cutaneous eruption in herpes zoster ophthalmicus affects in but a very small number of cases the whole cutaneous district of the first trigeminal branch. It always affects the distribution of the supra-orbitalis and mostly that of the supra-trochlearis; the former may be affected without the latter, the latter never, however, without the former. The eye does not suffer when the frontal distribution of the first trigeminal branch is alone affected. It is only in danger of being involved when, besides the frontal branch, the naso-ciliaris is also affected—i. e. the cutaneous eruption appears on the side and tip of the nose. In my case, the cutaneous eruption was on the forehead, upper lid and side of the nose down to the tip, and yet the eye escaped—a proof that ocular trouble is not *necessarily associated* with the affection of the skin of the nose. In the 24 cases grouped by Hutchinson (15 men and 9 women), the side of the nose was only affected 9 times; and in these 9 cases the cornea and iris were affected but 6 times. The participation of the eye is, according to Hutchinson, expressed in two ways—either as ulcer of the cornea or as iritis, with all the consequences of these diseases, even to loss of the visual organ.

In commencing, I spoke of the rarity of this complaint as the cause of its being so little known. There is, however, another reason for this, namely, its being mistaken for erysipelas of the face, as occurred in my case by the physician under whose care the patient first came. The two diseases are, however, very different. Herpes zoster frontalis never passes the median line of the face, and is strictly confined to the distribution of the first branch of the trigeminal in the skin of the brow, upper lid and nose, leaving the cheek and lower lid free. The products of herpes zoster frontalis are numerous fine vesicles grouped in masses (*plaques*), which afterwards run together, but never form single large blebs as in erysipelas. Herpes zoster frontalis is accompanied with very great local pain,

preceding the cutaneous eruption several days; moreover, we do not have the severe febrile action, indicating participation of the whole system in the disease, as is generally the case in erysipelas. Herpes zoster frontalis leaves scars on the skin, and often deep ones, which, from their being located over the distribution of the affected nerves, ever afterwards mark the occurrence of the disease, whilst, on the other hand, no traces are left by erysipelas. Herpes zoster frontalis attacks the patient but once, and does not threaten his life, the reverse of erysipelas of the face. The eye is in great danger in herpes zoster frontalis; not so, however, in erysipelas.

Finally, if we seek the essence of herpes zoster frontalis, there can be no doubt that the immediate cause of the disease must be looked for in the peripheral distribution of the cutaneous nerves from the first trigeminal branch. This follows from the fact that extreme pain in this nervous district precedes a long time every symptom on the skin. There is nothing by which we might refer the disease to the central nervous system, or suppose it to arise by reflex nervous action. Whether the peripheral distribution of the sensitive cutaneous nerves, or the vaso-motor (trophic?) running in the same district, are the originators of the disease, must at present still remain a question.

Herpes zoster frontalis is distinguished from all other forms of zoster by two characteristics. First, that the cutaneous eruption developes to deep pustules, leaving scars after the process has run its course; and second, that before the appearance of the eruption and after it has dried up, there are such severe neuralgic pains as to render the disease a severely painful one. For ophthalmology, however, herpes zoster frontalis has a special meaning, from the participation of the naso-ciliary nerve and the concomitant ophthalmic affection. Our English colleague Hutchinson deserves the credit of having brought this last point to especial notice, and thereby connected herpes zoster frontalis seu ophthalmicus with ophthalmology.

Discussion.

Dr. Kreitmair, of Nuremburg.—I can add nothing to the description of herpes zoster which we have heard, it is complete and accurate, and would only say that I had two cases occurring within a short time of each other, one a strong, well-built workman, with whom I saw the zoster commence. He applied to me with a swelling, complaining of such fearful pain that, from a man of his condition, was something new for me to hear. On the second and third days the pustules appeared in the described form of herpes zoster. The second case was that of a young girl about 15 years of age. These two cases occurred close together, at a time when neuralgic affections were almost epidemic in Nuremburg. I often had to control the neuralgia with quinine; the zoster was treated in the same way, and I may assert that it seemed to be limited thereby. In one case very visible deep scars were left.

Dr. Horner, of Zurich.—I may be allowed to add that I saw a case of zoster, in iritis, where the disease was not present on the side of the nose, so that the participation of the naso-ciliary branch was by no means so strikingly exhibited. I was called to the patient on account of the iritis. The appearances of herpes zoster were, however, perfectly marked, namely, the grouping of the vesicles and the secondary formation of bullæ.

Dr. Kreitmair, of Nuremburg.—I may add that in my two cases the globe remained intact.

Dr. Pagenstecher, of Wiesbaden.—If any one is interested in studying the scars they may see them on me, as I went through with the disease. It was in my last term as student in Würzburg, and I was not then, of course, so interested in the disease. I, however, remember the course of it perfectly well. It was just as Dr. Steffan has described it, only the prodromous stage was not so long. Some two days previously, I had a numb feeling over the distribution of the ophthalmic branch, and immediately before the eruption a very severe itching, with considerable swelling of the lymphatic glands on the whole right side down to the neck, so much so that leeches were ordered by the attending physician, Dr. Markus, since dead. Finally, the appearance of the eruption left no doubt as to its being herpes zoster. My eye was severely affected, I had keratitis but no iritis, and the whole course was quite rapid, so that by the eighth day the crusts fell of, leaving scars now nearly obliterated. I had no subsequent neuralgic troubles.

Dr. Laudsberg, of Görlitz.—I desire only to call attention to the admirable action of hypodermic injection of morphine, which certainly exceeds that of quinine and all other remedies. It is not simply momentary or symptomatic, but can mitigate, at least, the pain and intensity of the attacks for some days.

I have not hunted through the journals

for reports of individual cases, as I thought the above, occurring within the last few years, were sufficient at least to identify the disease and prove the correctness of my diagnosis. However, to show that cases are occurring repeatedly, and are properly diagnosticated and reported, I introduce the two following. The first is by Dr. Johnen, in the September appendix to the *Vienna Medical Newspaper*.

A woman, æt. 38, healthy, had for four days pain about the left eye, and in the eye itself, perfectly simulating neuralgia. So great photophobia that the patient kept the eye covered with a cloth. The upper lid was swollen; the conjunctiva of the lid and globe reddened and lax; the pupil contracted and the iris discolored. Iritis was the only diagnosis that could be made, and therefore atropine collyrium was ordered, with proper care of the eye, and general treatment. On the third day there were groups of herpes on the forehead to the median line, on the temple to the edge of the hair; a long group on the nose, reaching from the inner canthus to where the nasal cartilage commences. The upper lid was so œdematous that the globe could hardly be exposed; the conjunctivæ were reddened and swollen; the whole cornea steamy, a phylctenula directly in the centre; the eye still very sensitive to light, although the pupil is somewhat dilated. The patient has very little fever, although the constant pain has destroyed all appetite, and she is scarcely able to attend to her housework. The herpetic vesicles ran through their ordinary course. The corneal vesicles flattened and changed into an open ulcer, which healed but slowly, and left an opacity. The iritis disappeared without deposit. Besides atropine, treatment consisted of subcutaneous injections of morphine. Whilst the former dilated the pupil, the latter seemed to have no effect on the pain. A glance at the anatomy of the trigeminus shows that the zoster spread exactly in the course of the ophthalmic branch. Whether the cartilaginous portion of the nose, in the skin of which a branch of the ethmoid is distributed, escaped accidentally, like other clear portions of the skin between the vesicles, or from anatomical relations, the observer would not decide. He regarded the affection of the iris and cornea as part of the herpetic process, and not as caused by the stasis in the conjunctival vessels. The iritis was the first visible local expression of the disease, and already present before the inflammatory action of the other portions of the globe reached its height. The want of action of atropine, mentioned by Hutchinson, does not appear to be due to any specific action of the zoster, but dependent on the extreme inflammatory vascular injection as so often observed in iritis from whatever cause. In this case atropine had its usual effect. The observer regards the term herpes zoster *ophthalmicus* as more appropriate for this affection than herpes zoster *frontalis*.

Dr. Ringer, *Lancet*, Sept. 19, 1869, University College Hospital, reports the second:

The patient a lad of 17. The eruption was confined to the integument supplied by the ophthalmic and superior maxillary branches of the fifth, the part supplied by the inferior maxillary being unaffected. The eruption was on the left side, strictly limited by the median line, and affected the anterior part of the hairy scalp, the forehead, and upper part of the face and side of the nose, being bounded below by the mouth and a line drawn from the angle of the mouth to the malar bone, an inch and a half in front of the ear. The eyelids were œdematous and the conjunctivæ inflamed. Thus it corresponded closely to the cutaneous distribution of the supra-trochlear and supra-orbital and nasal of the ophthalmic, and of the orbital (temporal and malar) and infra-orbital branches of the superior maxillary.

I shall not here attempt to solve the nosological riddle presented to us by herpes zoster in general, but would refer to the monographs, &c., in the list at the end of this article. In these, others still are referred to, which will carry any one desirous of pursuing it, through the whole literature of this interesting subject. Special mention should be made of Mr. Bowater J. Vernon's report of five cases of herpes zoster ophthalmicus in the St. Bartholomew's Hospital Report, vol. iv. 1868.

Prof. Barensprung published in the Annals of the Charity Hospital at Berlin a series of articles on zoster, with reports of cases in 1861–63. His *suggestions* have lately been quoted and acted upon as if they were settled opinions, the very errors in diagnosis which he warned against fallen into, and his carefully observed facts treated with such nonchalance, that I think it but justice to him to translate the following passages from the original articles.* Under the etiology of zoster Prof. Barensprung says:—

"Physiological facts have long ago proved beyond doubt, that the cerebro-spinal nerves

* I refer to the article on zoster and the reported cases in Dr. H. F. Damon's little work on Neuroses of the Skin.

carry, besides the sensitive and motor, a third set of fibres of a different character, coming from the sympathetic system, and these alone must be thought of as the peculiar medium of trophic action. At all points where there are ganglia, such fibres enter the nervous cords, since they spring from the ganglion cells themselves. It is, however, the peculiar province of every large ganglion to supply certain organs with trophic fibres. Where, however, do those arise which go to the surface of the body, whose morbid irritation calls forth the curious phenomena of the rupture of zoster? We have already shown where they must arise; everything points to the posterior roots of the spinal nerves, each of which is furnished with a ganglion. The spinal ganglia give us the key to the solution of all the appearances.

According to Kölliker's observations, the sensitive nerve-fibres of the posterior roots pass through the spinal ganglia without forming connection with them; whilst the ganglionic fibres coming from the ganglia themselves never spread towards the spinal cord, but all take the peripheric course of the sensitive fibres. Close to the ganglion the motor fibres of the anterior root join, and thus form the short stem of the spinal nerves. This soon divides again into an anterior and posterior branch, each of which takes sensitive, motor and ganglionic fibres, and passes to the surface of the body.

I know very well that the difficulty of ascertaining this histologically throws many doubts upon its admissibility, and that some physiological experiments seem to speak against it, but the clinical facts appear to me to here offer absolute proofs. If this is so, and in reality the trophic action in the skin is brought about through the nerve-fibres coming from the spinal ganglia, then all cases of fully developed zoster and all cases of zoster running their course without other nervous disturbance, are to be referred to irritation of these ganglia themselves, as from them alone the trophic elements spring. In the course of the nerves these latter are so mixed with the sensitive and motor, that it is not conceivable how any cause can act to excite them alone.

The neuralgic pain attending zoster is explained by the transmission of the irritation from the ganglion to the special posterior root, and thus the latter may spread its excited condition by means of the spinal cord to neighboring or symmetrical nervous districts, whilst the trophic irritation remains unilateral, because the ganglion sends no fibres to or receives any from the spinal cord.

Besides the district, however, of the spinal nerves, we have seen zoster appearing in the course of the trigeminal, a cerebral nerve completely analogous to the spinal nerves in that its sensitive root is also provided with a ganglion close to its origin. The Gasserian ganglion here acts the part of the spinal ganglion, and on it seems to depend the trophic functions in the skin of the face."

Only two *post-mortem* examinations of patients with zoster had been reported, which Barensprung gives. One, by Rayer, afforded no result; the other, by Danielssen, showed *neuritis intercostalis*. The spinal ganglia, however, were not examined. Barensprung afterwards had opportunity of making one, the result of which is so interesting as to give it place here.

In September, a child one year old was taken into the hospital on account of scrofula, the glands of the neck and over the sternum greatly swollen, a bronchial catarrh and considerable emaciation. In the following May, without apparent cause, zoster appeared on the right side, in the form of a band more than two inches wide between the 6th and 9th ribs, behind spreading a line or two over the median line from the 6th to the 8th vertebræ, and terminating in front under the xiphoid process. This zona ran through its course, and the tuberculosis increasing and attacking the lungs, the child died, emaciated, on the 21st day. *Post-mortem* examination showed the signs of tubercle in the lungs and lymphatic glands. Upon very careful examination, the spinal cord was found unaltered. The anterior and posterior roots, from their origin in the cord to their entrance in the intervertebral openings, quite white and evenly firm. On opening the intervertebral canal and exposing the 5th to 9th intercostal nerve, great thickening and reddening of the 6th, 7th and 8th was noticed, especially the 7th, apparently due to a swelling of the neurilemma permeated with tortuous vessels. The 7th intercostal nerve was half as thick again as the 5th or 9th, these latter remaining quite white and unaffected; this enlargement reached about an inch on the anterior and not so plainly on the posterior branch; further on, the intercostal branch appeared quite normal and white. The 6th and 8th exhibited this redness and swelling, but not so markedly or for so long a distance as the 7th. The spinal ganglia belonging to these three nerves were more

firmly adherent on the wall of the intervertebral canal; the connective tissue here also more red and thickened, so that the ganglia seemed to have increased in volume. These differences were still plainer after the nerves, with the ganglia, had been dissected out and put in water, the coating of connective tissue not floating readily, as it was thickened; letting the light pass through showed the ganglia and the nerves coming from them of a dark-rosy red, this color being in the neurilemma and not in their substance. The microscope showed also undoubted remains of inflammation, principally, it is true, in the neurilemma; a fine granular mass was found in the external covering of the ganglia, as also between the minute lobes, partly irregularly strewn, partly massed in roundish groups and lumps, the brownish color of which would indicate escaped and broken-down blood-corpuscles; the connective tissue in which they lay was apparently richer in granules, less elastic and looser than the rest. These changes reached beyond the ganglion to the point of crossing, and to the two branches as far as they appeared externally reddened, gradually lost themselves, so as not to be seen in the distant part of the nerve. There was no peculiar alteration of the nerve-substance to be seen, either in the ganglion or in the nervous bundles, and yet here and there where the granular masses were most grouped the fibres were altered in form, varicose, coarsely granular, and even their continuity interrupted. Barensprung gives plates of the microscopic drawing of these appearances, and he adds:—"The *post-mortem* has shown what was to have been expected, that there is not in zoster a destructive process, but only a slight and readily reparative one. It has, moreover, shown very clearly that the disease originates in the spinal ganglia. In this connection, it seems to me to be of special interest that the inflammation extended peripherically outwards from the ganglion, and not through the posterior root to the spinal cord. If, as the microscope would seem to show, there is only inflammation of the neurilemma, then the inflammation would have spread in both directions, whilst its simply peripheric extension much rather points to conduction through the ganglionic fibres arising from the ganglia."

"To recapitulate: zoster depends on a disease of the ganglionic system, and in special cases on irritation of some of the spinal ganglia or the Gasserian; yet the peripheric irritation of a nerve having ganglionic fibres in it may be followed by a limited eruption of zoster vesicles. By this it is not at all meant that further *post-mortem* examinations must necessarily show always coarse structural alterations in the ganglia. The pathology of the diseases of the brain and spinal cord prove how often any anatomical grounds for many disturbed nervous actions escape the best armed eyes."

Now, aside from any theory drawn from it, this observation of Barensprung is certainly very important and interesting, sufficiently so to be quoted in full by Proust in an article on the "Troubles of Nutrition consequent on Affections of the Nerves," published in the *Archives Générales* for February, 1869. In connection with it, Proust quotes another case of Charcot's, which he says gives it a new interest. A woman, aged 78, entered Salpêtrière Jan. 16, 1865, with cancer of the right breast, not ulcerating. About the 15th of December, an eruption of zona appeared over all the right half of the neck, behind, on the side, and in front, not passing the median line either before or behind. The perfectly characteristic groups of herpetic vesicles were pretty uniformly distributed and numerous on the nape and above the clavicle; some were scattered over the top of the shoulder, the lowest part of the cheek and the mastoid region, and finally on the infra-clavicular region to the upper edge of the pectoralis major. It is seen that the eruption occupied all the portion of the skin supplied by the branches of the cervical plexus of the right side. The autopsy showed nothing in the cord. The intervertebral canals were open, which was verified; the anterior and posterior roots, both right and left, had preserved their volume and color; on the right side, the spinal ganglia, as well as the nervous trunks formed by the union of the spinal roots, presented a slight tumefaction and vascular injection, as shown by the deep red color. Outside of the openings, the red color of the nerves gradually faded, and was no longer visible on the nervous fibres coming from the cervical plexus. Microscopic examination of the ganglia and the red and swollen nervous trunks showed the following:—In the ganglia the nerve-cells presented no appreciable alteration; they contained a large quantity of dark pigmented granulations, but these existed nearly in the same number and of the same character in the ganglionic corpuscles of the left side. The vascular plexus of the ganglia was vividly injected, and the addition of acetic acid brought out nuclei more nume-

rous than normal in the laminous texture. In the nerve-trunks there was marked ingestion of capillary vessels of the neurilemma, and acetic acid brought out very abundant nuclei. The nerve-tubes retained their physiological character and condition. (Vide Charcot et Cotard, *Mémoires de la Société de Biologie*, 1866, p. 41.)

(To be continued.)

Bibliographical Notices.

A Treatise on the Diseases of the Eye. By J. Soelberg Wells. Philadelphia. 8vo. Pp. 739.

The literature of ophthalmic science seems in no way likely to suffer from want of earnest and frequent contributors. No other branch of medicine has made such great progress during the past twenty years, and the rapid increase of its literature is the natural consequence of its remarkable advance.

For many years the original work of Mackenzie was the standard authority, and although we have on most points left it far in the rear, yet in some respects it stands on the same ground as its more modern brethren. Lately it has been thoroughly revised and brought up to the modern mark in French by MM. Warlomont and Testelin.

Recently several excellent treatises on the eye have appeared, among which may be mentioned in particular those of Stellwag von Carion and Wecker. Stellwag von Carion's (Am. translation from 3d German ed.) is a very valuable work, embracing the whole subject, but the style of the translation is frequently faulty and heavy, and the author's meaning at times difficult to appreciate, especially on the subjects of accommodation and refraction. It will always be useful, however, as a work of reference to the specialist, but can hardly find a place as a text-book for students or avail much to the general practitioner. The work of Wecker, which has now passed through two editions, is undoubtedly the clearest and most complete that has yet appeared, but its size, cost, and the fact that it is not in our own tongue, will prevent many from obtaining it. Besides these there are the works of Bader, Powers, Macnamara and others, as well as many monographs and a large amount of journal literature on special departments of the subject.

With such a formidable array of authors already in the field, it would at first sight seem that there was no occasion for another treatise on the diseases of the eye. This, however, is not the case. Mr. Wells's work will be found not only highly useful to the specialist, but will fill a want long felt by the general practitioner and student, in offering them a comprehensive and clear description of the subjects of which it treats.

Mr. Wells has appeared already as a writer of numerous articles connected with his specialty, and a small treatise on "Impaired Vision," in which he displayed a happy faculty of simplifying and condensing the difficult subjects of accommodation and refraction. The same clearness and conciseness of expression characterize the present work almost throughout the volume.

The arrangement of the *materiel*, which differs from that of any other author, is not objectionable, though we prefer that of Wecker as more natural anatomically. The minute anatomy and the pathology of the subject are not given as distinct parts of the work, but only so much as is necessarily involved in the description of each disease, and then in rather limited amount.

The book opens, as is usual, with remarks about bandaging, manipulation, &c. The chapter on conjunctival diseases is well written, the descriptions of the various affections graphic, and the treatment up to the best modern standard. The author thinks "that the term 'simple conjunctivitis' should be altogether discarded. It is in fact only the mildest form of catarrhal ophthalmia, and hence there is no reason to make it a distinct form of disease." Of purulent ophthalmia he says, it may "be regarded as a more severe form of catarrhal ophthalmia, in which all the symptoms of this affection are intensified in degree." Indeed, it has been proved by experimental observation, that the different forms of conjunctivitis are allied in type, if varied in the degree of their severity, and that the secretion of any form of the disease is capable within certain limits of producing in sound eyes almost any of the other forms. The use of the acetate of lead, either as a wash, as advised by the author, or in the heroic manner adopted in Belgium, is to be deprecated, since with the slightest abrasion of the cornea an opaque deposit, difficult and at times dangerous to remove, is the result.

The treatment of diseases of the cornea is excellently given, though we must differ from Mr. Wells in the propriety of puncturing the bottom of an ulcer threatening

to perforate. The very objects for which paracentesis corneæ is done, viz., to prevent perforation, synechia and harm to the capsule of the lens are seriously endangered by this procedure. The old method of paracentesis at the periphery of the cornea certainly appears far safer, until better reasons are offered for the substitution of another. With regard to diffuse or interstitial corneitis he very justly says, "I cannot at all agree with the view that diffuse corneitis is always due to inherited syphilis, for although I have often seen it associated with the latter, yet in many cases not the slightest trace of a syphilitic taint could be ascertained, and there was a marked and complete absence of the peculiar syphilitic features and the notched teeth."

In the treatment of non-specific iritis, where there is considerable tendency to the exudation of pus or lymph at the edge of the pupil, mercurial inunction is strongly advocated—a practice which has not obtained here of late. The operation of iridodesis (Critchett's), but rarely done in this country, is urged, and with apparently good reason, for artificial pupil in lamellar cataract, conical cornea and leucoma corneæ. The subject of cataract and the operations therefor are well and thoroughly discussed, the preference among the latter being given to Von Graefe's modified linear extraction —and, judging from the results of this operation, now practised for some three years, it has surpassed every other form of extraction.

The portions of the book devoted to the retina, optic nerve, amblyopia and amaurosis are written with admirable clearness, and give the latest researches of English and continental authorities on these subjects. The chapter on glaucoma is a succinct and thorough exposition of the history, diagnosis and treatment of this much-written-about disease, and is decidedly the best resumé of the subject that we have in our language.

In the more purely scientific parts of the work Mr. Wells is as successful as in the descriptive portions, and the use and theory of the ophthalmoscope and the anomalies of refraction and accommodation are treated in a manner which will render them plain to any reader acquainted with the science of optics, even in a slight degree.

The remainder of the book is taken up by the consideration of the affections of the extrinsic muscles of the eye, lachrymal apparatus, orbit and eyelids, and is equally worthy of careful reading with the previous portions, especially the chapter on the first of the subjects just mentioned.

As a whole, the book is remarkably well written, in a distinct and agreeable style, though we are surprised to find an English author coining such words as "diagnose" and "microscopizing." It is beautifully printed on good firm paper, and has a number of woodcuts and diagrams. The plates are chromolithographs copied from Liebreich's Atlas, and are good reproductions of illustrations of the morbid appearances of the eye, which have not yet been surpassed, and indeed, hardly equalled.

The dedication is to Von Graefe, and from the frequent occurrence of that distinguished oculist's name, as well as other German authorities, throughout the volume, it must be regarded as rather a German than an English work—in all save the language. But this is unavoidable, for the Germans have been the originators of almost all the great modern advances in the therapeutics and surgery of the eye. Still, if the author cannot lay claim to much originality, he is at least entitled to great praise for having performed his work with excellent judgment, in a manner at once conscientious, thorough and agreeable. R. W.

Medical and Surgical Journal.

BOSTON: THURSDAY, JUNE 3, 1869.

DR. D. F. LINCOLN discontinues his connection with the JOURNAL, as it is difficult for him, with his other avocations, to give his attendance at the office. We are still, however, to have the benefit of his German scholarship in the supply of translated extracts from German periodicals. Those extracts will be designated by his initials, as heretofore.

Dr. H. H. A. BEACH has, for the present, kindly consented to discharge certain duties on behalf of the Editor. It is somewhat uncertain whether Dr. Beach will be able to continue his valuable aid to us after the lectures commence at the Medical College, where he is engaged as Assistant Demonstrator.

MR. EDITOR,—By request of Prof. Freer, who is now on his way to Europe, I send

you, by mail, the *Chicago Medical Journal*, containing an article on the "Discovery of a new Anatomical Feature in Human Blood Corpuscles"; also, by express, the electrotype plates of the diagrams illustrating the same, hoping that you may deem the discovery there set forth of sufficient importance to re-print the article in your valuable JOURNAL.

This article will, in due time, be followed by others, which will be promptly forwarded to you if you so elect. * * * *

Yours truly,

F. L. WADSWORTH, M.D.,

For Prof. J. W. FREER, *Chicago, Ill.*

We would express our profound appreciation of the favor done us by Prof. Freer, in enabling us to use his valuable contribution to histological investigation.

In the *Chicago Medical Journal* of May 15th, 1868, Vol. XXV., No. 10, in a brief, hastily written article, I announced that I had, as I believed, discovered that human blood corpuscles "are not, as heretofore supposed, simply bi-concave discs; but, on the contrary, there may be seen (by the use of Wale's illuminator), a nipple-like eminence in the centre of the concavity of each well-formed disc. This papillary eminence is about one ten thousandth (·0001) of an inch in diameter at its base. That it is a true anatomical form, and not a change incidental to desiccation, &c., is shown by its appearance at the instant of withdrawal of any given specimen, while the corpuscles are still plump and smooth in all other respects."

Continued investigation on this important subject has served only to confirm the announcement then made; and having had the opportunity of exhibiting corpuscles as herein described, to several eminent men of acknowledged scientific ability, and having received their opinion in corroboration of my own, I propose to set forth in this paper the views heretofore entertained upon this subject, and in contradistinction present my own more fully, illustrated by accompanying diagrams, which were drawn by an artist who had never before seen blood corpuscles, and, consequently, to be taken as unprejudiced testimony.

Among physiologists and microscopic anatomists there has been but one generally expressed opinion as set forth in standard works, illustrated and otherwise; *to wit*, that the human blood corpuscle is non-enucleated.

It may appear incautious, and even rash, to array one's self against evidence so weighty, but my convictions have ripened under careful and persistent investigation, and I deem the announcement timely and worthy of earnest attention.

It may be superfluous to quote the opinions of authors with whom nearly all are familiar, but for a concise presentation of the subject I deem it advisable.

Prof. F. here refers to Todd and Bowman, Wharton Jones, Mueller, and Kölliker as holding the opinion that the red corpuscles of human blood are not provided with nuclei; and then quotes Longet as saying:—

"With man and other mammiferous adults the blood globules appeared to be deprived of nuclei. There is not even an exception in the family camelidæ, which, by the form of their globules, approach to those in which the presence of nuclei is not doubtful. That which has been taken for a nucleus is but the thin, central part of the disc. This remark, already made by Hodgkin and Lister, has been confirmed by Henle, Donné, Wharton Jones, &c., notwithstanding various micrographers admit that sometimes among the ordinary globules without nuclei one meets with those that appear nucleated. Such, at least, is the result of the observations made by Wharton Jones, Schultz, Nasse and Busk, with man and other mammifera."

As all investigators are so nearly in harmony on the subject of the anatomy of these organic forms, the methods of observation having been uniformly the same, it is deemed unnecessary to make further quotations.

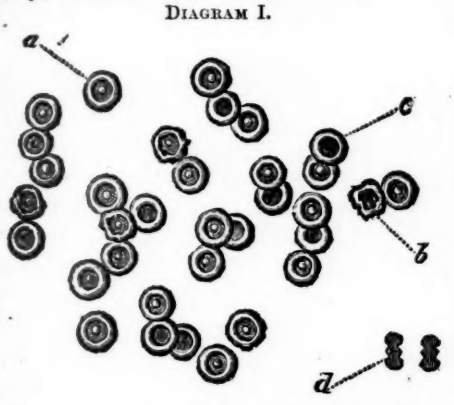
In presenting my own views in contradistinction to the foregoing, I wish to call especial attention to my method of investigation. Heretofore all examinations of blood corpuscles have been made by transmitted light, from which we might anticipate, *a priori*, that, with instruments of the same degree of perfection, similar results would be obtained. On the contrary, all of the research upon which my present convictions are based has been prosecuted by the use of reflected light, the object resting upon a polished jet slide.*

The accompanying diagrams set forth faithfully the appearance made manifest by this method when properly pursued.

* Those who wish to repeat these observations, by means of Wale's Illuminator, will find it indispensable that the object-glass be arranged for uncovered objects, and the discs spread thinly over the surface of the slide. Corpuscles found in defibrinated blood are the best for observation. Those found in rouleaux do not show the nuclei satisfactorily.

DIAGRAM I.—*a*, represents the perfect, human blood corpuscle. It will be seen that the centre presents a slight elevation, surrounded by an annular depression, while the circumference of the disc is, comparatively, thick, smooth and rounded.

DIAGRAM I.



b, represents a disc with serrated and shrivelled margin, with a perfect central elevation remaining.

c, a corpuscle without the central elevation.

d, is a hypothetical diagram of a disc placed upon its edge.

DIAGRAM II.

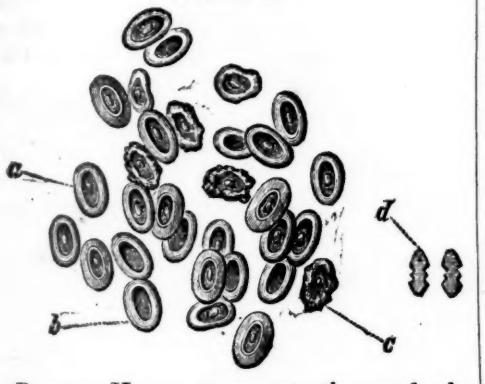


DIAGRAM II.—*a*, represents the perfectly formed, oval and characteristic disc, or globule of the frog. In the central portion may be seen an oval depression, in the centre of which can be observed the elevation representing the nucleus. The margin is shown to be rounded, smooth and thickened.

b, is like the former in every respect except the central papilla is absent.

c, a shrivelled corpuscle.

d, a corpuscle, as it would appear set upon its edge.

It will be seen from the foregoing explanation that these bodies do not all possess a nucleus, or central elevation. In fact, there are in both the human blood and in that of the frog a large proportion, perfect in every other respect, that do not possess this peculiarity. Whether this fact is due to an absence of this feature on one of the surfaces of the corpuscles or to its non-existence in a certain percentage of cases, I am undetermined.

I have, as yet, examined but few pathological specimens. In one instance, however, in a case of advanced typhoid fever, the corpuscles, without exception, were found serrated, shrivelled and distorted in the most remarkable manner, with the exception of the nucleated centre. This seemed to maintain its integrity.

The reader, by reference to the diagrams, will observe that the corpuscles, both of the human and reptilian blood, are analogous in their general features, as, witness the elevated nuclei in the centres, the surrounding depression and the elevated margins, together with the entire absence of nuclei in nearly equal proportions of each. It will also be observed that certain numbers are imperfect in outline, as if affected by disintegration; and this is true of a similar proportion of every specimen that I have ever examined. This apparent analogy of form and feature between mammalian and reptilian corpuscles only supports what is generally acknowledged should obtain with these bodies in order to bring them in harmony with the known homology of other tissues, from whatever species of animal obtained. I believe that it is never denied that nerve, muscular, bony and other tissues, when compared with their kind, are essentially alike in their anatomical constitution. Why should blood tissue form an exception to this general rule? Do not the corpuscles perform the very same function, whether floating in the blood of a reptile or in the vessels of man?

With one exception I have not, as yet, extended my observations to the condition of blood discs in the various parts of the body. In the spleen pulp I found them mainly imperfect in form, being generally serrated, shrivelled, and seldom nucleated. Hæmatine, in granulated masses, was seen interspersed among the corpuscles. White corpuscles, in great numbers, were arranged around the margin of the specimen.

The Illuminator does not reveal anything unusual concerning the white corpuscles; they merely appear as non-nucleated, globular bodies. It is remarkable, however, that they never associate themselves with the red discs, there seeming to be a perfect antagonism of position.

The announcement of the death of Dr. Calvin G. Page will carry surprise and grief to a large circle of acquaintances and friends. His fellow citizens in general, also, among whom he was widely known as a man of uncommon intelligence, energy and public spirit, will receive the sad tidings with deep regret. Dr. Page was a man of great worth, and warmly beloved by those who knew him, both in his profession and out of it. He was the writer of the last report of the School Committee—a document marked by excellent qualities of judgment, courage and taste. He served honorably through three years of the war, and his early death is to be traced directly to a disease contracted from his exposures in that arduous work. He is one more victim added to the vast multitude of our noblest and best sacrificed in that dread struggle for the salvation of the country. His spirit has ascended to heaven in the very hour when flowers were strewn and bells tolling in memory of the great army of his departed comrades. His memory will long be green in many a loving heart.

To the above appropriate words, which we take from the Boston *Transcript*, we must be permitted to add that the profession of which Dr. Page was a valued member may claim to be among his most prominent mourners.

NOTES FROM L'UNION MEDICALE.

Salivary Calculi.—M. Paulet, at the Imperial Society of Surgery, exhibited two salivary calculi which he found in Wharton's duct, in a patient affected with a purulent discharge issuing from the floor of the mouth. The calculi were in the duct of the left side, and M. Paulet extracted them by excision. He ascertained that the submaxillary glands of both sides were stuffed with calculi. These stones are not rare in Wharton's duct; as M. Paulet has collected 65 cases of them, while the foregoing is the only instance in which he is cognizant of their presence in the sub-maxillary glands themselves. M. Panar, however, presented a salivary calculus, which he had extracted by excision from the sub-maxillary gland. In this case pus was seen issuing from the open orifice of Wharton's duct. M. Desormeaux remarked that he had once extracted a stone *from Stenon's duct.*

At the same society M. Liégois read a paper, the subject of which was the *spermatic fluid.* He cited the investigations of various observers besides himself. The following are his conclusions, viz.:—1st. Every healthy man—adolescent, adult, or aged—who is free from anomalous peculiarities, defective conformation, and traces of former affection of the organs of generation, has in his spermatic fluid the essential elements of fecundation. 2d. Diseases—acute, chronic or constitutional—in the adult do not appear to produce *azoöspermia*; which, however, is often the consequence of them in men of advanced age. 3d. Blenorrhagic epididymitis — the most common of all the affections of the internal organs of generation — almost always, if bi-lateral, definitively prevents the excretion of zoösperms and becomes thus a cause of sterility; when it is unilateral, it by sympathy induces a lowering of functional activity in the healthy testicle, diminishing the quantity of spermatozoa furnished by it, and thus exerting an unfavorable influence on the fecundating properties of the spermatic fluid; non-blenorrhagic epididymitis, whether bilateral or unilateral, is far from having the same degree of unfavorable influence as the blenorrhagic on the secretion and excretion. 4th. Affections involving the testicular parenchyma are always grave as regards sterility, whether both glands or one testicle only be concerned; of all these last-mentioned affections chronic syphilitic orchitis is the least to be dreaded in this respect, since the sterility it generally induces may disappear under appropriate treatment. 5th. Lesions which he denominates *peri-testicular*, *peri-epidymal*, and *peri-deferential* do not appear notably to affect spermatic secretion or excretion—leaving out of view varicocele, which, when carried to a certain point, induces testicular atrophy, and conseqnently *aspermatozia.* 6th. Spermatorrhœa, in the generality of cases, does not modify the spermatic secretion; in certain individuals affected with it, however, azoöspermia may exist, even though they may not have reached that degree of prostration to which the affection often leads.

Accidental Wound of an Artery during an Operation for Vesico-vaginal Fistula; Fatal

Result.—M. Paul Horteloup communicated the case to the *Société Impériale de Chirurgie.* He was operating at the Hôpital Beaujon for vesico-vaginal fistula, and was just making the last cut with the bistoury when a jet of blood struck his face, and the vagina was filled at once by the hæmorrhage. Neither ice nor the tampon stopped the flow, which was, however, controlled by seizing the posterior lip of the fistula with a screw forceps and a polypus forceps. The tampon, injections of ice water into the bladder, compresses wetted with cold water to the abdomen, were used, and wine, beef-tea and ice administered. A few days after, the forceps were detached in the movements of the patient, and a new hæmorrhage set in, to be controlled as before, with the forceps. The patient, however, had lost so much blood that she sunk five days subsequently.

At the autopsy there was found general acute peritonitis, and a division through two thirds the diameter of the left utero-ovarian artery.

We perceive that advertisements of Female Medical Schools are making their appearance. Though our tastes are not in favor of Female Physic, we hold to the motto "a fair field and no favors asked"; and we therefore say, if medical journals are to be cumbered with advertisements, let the female persuasion have their share. It is another matter with certain extra-pharmaceutical preparations.

Massachusetts Medical Society.—For the following report of the first day's proceedings we are indebted to the *Boston Daily Advertiser.*

The annual meeting of the Massachusetts Medical Society began in this city on Tuesday morning, June 1st.

At ten o'clock the members of the Society visited the Massachusetts General Hospital and the Boston City Hospital, where various interesting operations were successfully performed.

At 12 o'clock the members assembled in Bumstead Hall, Dr. Charles G. Putnam, of Boston, the President, in the chair. Two hours were passed in the reading of papers which had previously been announced, as follows:—

Myxoma, or Hyperplasia of the Villi of the Chorion. By Alexander D. Sinclair, M.D., Boston.

2. General Management of the Insane. By Merrick Bemis, M.D., Worcester.

3. Formation and Significance of Renal Casts. By Robert Thaxter Edes, M.D., Hingham.

4. Physiological Action of Bromide of Potassium, as determined by experiment on the lower animals and man. By Robert Amory, M.D., Brookline.

At 4 o'clock, a second meeting was held in Bumstead Hall, when Samuel G. Webber, M.D., of Boston, read a paper on the Microscopical Study of the Nervous System.

Evening Meeting.—The annual business meeting of the Councillors of the Society was held at the Society's rooms, Temple Place, on Tuesday evening, Dr. C. G. Putnam presiding.

The Treasurer's report, which was read and accepted, stated that the receipts of the Society during the past year, including a balance of $2022.28 from the previous year, were $9384.97; the amount expended was $7468, leaving a balance of $1916.27. The principal expenditures—nearly $2500—had been for publications. The gross amount received for assessments during the past year was $3840, of which $1139.70 was refunded to District Societies, leaving a net amount of $2900.

The invested property of the Society amounted to $30,420.17, the income from which during the year was a trifle over $2000.

The Secretary read a list of sixty-six members who had been admitted to the Society since June 3d, 1868, and also a list of twenty members who had died during that period.

A letter was read from a member of the Society offering a prize of $30 to any medidal student of this State, or any regular physician of less than two years' standing, for the best paper on "The Physiological Action of some Drug of the Materia Medica, as determined by stated and original experiment."

The Committee on Resignations reported that the following members, being above 60 years of age, had signified their intention to retire from active membership:—A. W. Draper, West Roxbury; S. A. Toothaker, Wilmington; Joshua Porter, North Brookfield; S. D. Townsend, Boston; E.

Reynolds, Boston; C. H. Allen, Cambridgeport; David Bradford, Montague; H. C. Perkins, Newburyport; Enoch Cross, Newburyport.

The reports of several committees were read and accepted.

On motion of Dr. B. E. Cotting, of Roxbury, the following rule was adopted:—

"That all reports upon scientific subjects and scientific papers read to the Society be referred to the Committee on Publications, with instructions that they refer each separately to a committee of experts, whose names shall not be disclosed; and that such as said committee of experts shall designate shall be published at the expense of the society, if there be unappropriated funds in the treasury."

The following were the officers elected for the ensuing year:—

President, Dr. C. G. Putnam. *Vice President*, Dr. H. L. Sabin. *Corresponding Secretary*, Dr. C. D. Homans. *Recording Secretary*, Dr. C. W. Swan. *Librarian*, Dr. J. C. White. *Treasurer*, Dr. F. Minot.

The orator chosen for the next anniversary meeting was Dr. Wellington, of Cambridge, and Dr. George H. Lyman, of Boston, was appointed chairman for that occasion.

The following gentlemen were chosen on the committee of arrangements:—Drs. C. D. Homans, R. M. Hodges, J. N. Borland, A. Coolidge and A. P. Hooker.

Boston was selected as the place of the next anniversary meeting. The meeting then adjourned.

The annual meeting of the society was held in Bumstead Hall, at 10 o'clock, Wednesday morning. At 1 o'clock, Dr. Alfred Hitchcock delivered the annual address. The proceedings closed with the anniversary dinner, which was served in the Music Hall at 2 o'clock, under the presidency of Dr. J. B. Upham.

Value of the Rhinoscope.—Dr. F. I. Knight, at the March meeting of the Suffolk District Medical Society, reported the removal of three polypi with the aid of this instrument. The patient, a young lady, 20 years of age, came to him with the following history. Eight months before, she washed her hair, and sat down by the window to dry it. She "took an awful cold," had coryza, &c., and the next day and ever since had noticed complete obstruction of the right nostril on expiration, and considerable obstruction on inspiration. There had been no discharge from the nose since the first few days. Her voice was much affected, she talking as if she was suffering from a severe cold in the head all the time. She had been told that she had catarrh, and had been given various solutions to snuff up the nose. On examination of nasal passages anteriorly, nothing definite could be seen. A large nasal probe could be passed through both nostrils to the pharynx. On examination of posterior nares with the rhinoscope, the obstruction was seen to be due to two large gelatinous polypi, moving from the mucous membrane over middle and inferior turbinated bones on the right side, one of which on expiration shut down like a valve over the inferior meatus. There was also a small fibrous polypus on the posterior surface of the soft palate. The polypi were all removed posteriorly by forceps applied with the aid of the mirror. The relief to the respiration and voice was of course immediate.

Results of Transfusion.—Professor Landois, of the University of Griefswald, who has interested himself much in the subject of transfusion, after giving a critical account of the most recent publications on the subject, thus sums up, in a recent number of the *Wien. Med. Woch.*, the results that have hitherto been obtained:—1. Transfusion has been performed ninety-nine times in cases of hæmorrhage, in eleven of which cases no successful result was even possible. Of the remaining eighty-eight cases, sixty-five were attended with success, twenty were unsuccessful, and in three the result was doubtful. 2. It has been performed twelve times in cases of acute poisoning, one of these being hopeless. In three the results were favorable, and in eight unfavorable. 3. For various forms of disease attended with exhaustion, it has been resorted to forty-three times, the most unfavorable prognosis having been frequently delivered. In these the results were favorable in twelve, unfavorable in twenty-one, and doubtful in nine, while in one case it was a mere desperate experiment. Professor Landois observes that these statistics speak very satisfactorily for transfusion, and that the results would be far more favorable if this almost harmless operation were not usually driven off to the last minute.—*Medical Times and Gazette.*

In a paper on the Pathology of Typhus, and its connection with lesion of the cervical portion of the great sympathetic nerve, Dr. R. Beveridge says:—In a case of ex-

ophthalmic goitre, which occurred in the Aberdeen Infirmary, under the care of Dr. Reith, and of which the particulars were published in the *Medical Times and Gazette* of Nov. 11, 1865, I demonstrated the existence of extensive enlargement of the cervical ganglia of the sympathetic, and from that case was led to examine the condition of the nerve in typhus, with the result of finding in every case alteration of structure there to a greater or less extent.

From 1863 to 1865 an epidemic of typhus prevailed in Aberdeen, and during that period upwards of 1700 cases were treated in the Infirmary, and of these about 230 died. *Post-mortem* examination of these fatal cases was made as often as permission could be obtained from the relatives (which unfortunately was most frequently refused), but for the first eighteen months without any definite result being obtained. All the important organs of the body were examined, but especially the intestines, lungs, and brain; and in none was any constant lesion found. The intestines were usually found natural; sometimes, though rarely, with slight appearances of congestion here and there—never with ulceration. The lungs never presented any trace of deposit; they were usually natural, or with merely passive congestion behind, the result probably of position; sometimes this last was found to drift into low pneumonia. The brain usually presented the appearance of congestion, but without any effusion, and without any alteration in texture of the cerebral substance or of the membranes. It was not, however, till the sympathetic nerve was made the subject of examination that any definite result was obtained. When attention was directed to this, it was found to present lesion in the form of enlargement caused by granular deposit of some of the cervical ganglia, in every case examined. [These amounted to ten in number.]—*Medical Times and Gazette.*

Hydrophobia in a Flock of Sheep.—During the past two or three months hydrophobia has been alarmingly prevalent in the neighborhood of Preston, and especially so in the town itself. Many valuable dogs of all breeds have been destroyed at the police station with prussic acid, the whole number, good, bad, and indifferent, amounting to two or three scores or more. About three weeks ago, nine lambing ewes, the property of Mr. Draper, Bradley Hall Farm, Croston, six miles from Preston, were bitten by a strange dog, and having since exhibited undoubted symptoms of rabies, have just been all destroyed. The lambs were preserved.—*Medical Press and Circular.*

Cries of a Fœtus in Utero.—The *Scalpel* states that Dr. Dubreuilh, of Bordeaux, had under his care a girl of 16, who, towards the end of gestation, was seized with eclampsia. Chloroform was used, and a very small male child was extracted. The breech of a second child now presented, and, just as the water broke, the persons present heard the cries of the child, as if they issued out of a box, and they continued until the delivery was effected by the feet. The cries were heard at the moment the accoucheur pushed up the breech to seize the feet. Air had probably then penetrated into the uterus, which was not quite filled by the second fœtus, and the latter, having inspired it, began to cry.—*Ibid.*

Urinary Infiltration in Relation to Gangrene.—G. Simon (*Deutsche Klinik*, 15, 1869) makes the following statements, based upon numerous experiments made on the lower animals:—

Acid wine, if pure and in small quantities, is as innoxious as water in its effect upon animal tissue. If alkaline, or if mixed with sufficient blood, pus or mucus to make it alkaline, its injection into animal tissue produces all the destructive effects which are usually ascribed to urinary infiltration.

Acid urine, far from tending to cause decomposition of tissue, seems to act as a preservative—like a solution of common salt. A portion, placed in a tight vessel, with a small quantity of putrescent animal tissue, remained acid five or six days, and on the tenth day was not yet decomposed.

Acid urine was allowed to remain for a long time in contact with the subcutaneous tissue, in living animals. From the absence of evil consequences in this, and all the preceding experiments, it is concluded that the danger from operations such as the supra-pubic puncture is not due to the presence of urine *per se*, but to that of alkaline urine—and that the appropriate precaution in such operations, is treatment directed against catarrh of the bladder, if any exist. It is also needless to keep the patient lying upon his face, or to leave the catheter in the puncture continuously.

The really important cause of gangrene in urinary infiltration is concluded to be the *pressure of fluid* upon the tissues in which it lies. The author has produced the same effect by simple water, injected so as to exert a constant pressure under the cutis.—*Allg. Med. C. Ztg.*, No. 31. D. F. L.

Medical Miscellany.

American Association for the Advancement of Science. *Special Circular to Persons Interested in the Use of the Microscope.*—In making arrangements for the meeting of the American Association for the Advancement of Science, to be held at Salem, commencing at 10 A.M., August 18th, 1869, the Local Committee, in order to give encouragement to the general and increasing interest in the use of the Microscope, have decided to furnish rooms for the display and comparison of Microscopes, Objectives, Accessory Apparatus of all kinds, Test Objects, and Objects of Scientific and Popular interest.

It is intended to have as complete a collection as possible of instruments of both American and Foreign manufacture. Those who are possessed of Microscopic stands, Objectives, or Accessory Apparatus in any way remarkable for excellence of performance or design, are requested to bring them to the meeting.

The objects of this exhibition will be to assist the progress of scientific research, by social intercourse and a full comparison and discussion of whatever is new and important in microscopical investigation, and to encourage the manufacture and use of this valuable instrument.

Arrangements have been made to give ample opportunity for the use of the Microscopes both day and evening. A safe place has been secured for the deposit of instruments sent beforehand to the care of Mr. Bicknell, or brought by visitors who do not wish to keep them in their own possession.

A Sub-Committee has been appointed by the Local Committee to make the necessary arrangements. Further information relating to the subject can be had by addressing

Edwin Bicknell,
Sec'y of the Sub-committee,
Peabody Academy of Science, Salem, Mass.
Salem, May 24, 1869.

Paris Faculty of Medicine.—At the Faculté de Médecine de Paris, Dr. Regnauld, Professor of Pharmacology, was prevented from giving two of his lectures by the noise and outcries of his students. The excitement against the Professor is attributed to his severity at examination.

Messrs. Codman & Shurtleff, makers and importers of Surgical and Dental Instruments, 13 and 15 Tremont Street, Boston, write us that they have been Dr. Auzoux's agent for the past ten years. They have printed copies of his catalogue.

The Massachusetts Medical Society having offered a prize of fifty dollars for the best dissertation "which shall describe *in plain language, briefly,* an effective and ready method of ventilating sick rooms,—one that can be put in operation at once, *at the moment needed, with least difficulty and expense,* in houses of ordinary construction," we hereby offer, as the only possible way of fulfilling all the conditions demanded, the following:—

Prize Essay on an effective and ready Method of Ventilating Sick Rooms, &c. &c. &c.

Pull down the upper window-sash and leave the fire-place open.

The prize above mentioned may be sent to the Publishers of The Medical Gazette.—*N. Y. Medical Gazette.*

Professor Oppolzer, of Vienna, has received the cross of knighthood of the order of Leopold. The rank of Aulic counsellor has been conferred on Professors Brücke and Skoda, of Vienna; and that of counsellors of state on Professors Jaksch and Halla, of Prague.—*British Medical Journal.*

Dr. Hebert says:—What every family should keep in mind is this, that mustard poultices ought not to be made with hot, but with lukewarm water. —*Medical Press and Circular.*

MEDICAL DIARY OF THE WEEK.

Monday, 9, A.M., Massachusetts General Hospital, Med. Clinic. 9, A.M., City Hospital, Ophthalmic Clinic.
Tuesday, 9, A.M., City Hospital, Medical Clinic, 10, A.M., Surgical Lecture. 9 to 11, A.M., Boston Dispensary. 9–11, A.M., Massachusetts Eye and Ear Infirmary.
Wednesday, 10, A.M., Massachusetts General Hospital, Surgical Visit. 11 A.M., Operations.
Thursday, 9 A.M., Massachusetts General Hospital, Medical Clinic. 10, A.M., Surgical Lecture.
Friday, 9, A.M., City Hospital, Ophthalmic Clinic; 10, A.M., Surgical Visit; 11, A.M., Operations. 9 to 11, A.M., Boston Dispensary.
Saturday, 10, A.M., Massachusetts General Hospital Surgical Visit; 11, A.M., Operations.

To Correspondents.—The following communications have been received:—Spontaneous Amputation in Utero—Sympathetic Ophthalmia.

Erratum.—The signature "Editor" should have been appended to foot-note on page 301.

Pamphlets Received.—Monthly Report of the Department of Agriculture, for March and April, 1869, Washington.—Eleventh Annual Report of the Medical Superintendent of the Provincial Hospital for the Insane, Halifax, N. S.—Fibro-cystic Tumor attached to the Fundus of the Uterus; Seventeen other Tumors in the Cavity of the Abdomen; with some account of Abdominal Section for the relief of such and similar Cases. By W. W. Dawson, M.D., Surgeon to the Cincinnati (O.) Hospital.—Annual Report of the Births, Marriages and Deaths in the City of Boston, for the year 1868.

Died,—In this city, May 29th, Calvin G. Page, M.D., aged 39.—At Quincy, May 21st, Ebenezer Woodward, M.D., aged 71 years.

Deaths in Boston for the week ending Saturday noon, May 29, 112. Males, 68—Females, 44.—Accident, 1—congestion of the brain, 2—disease of the brain, 3—bronchitis, 5—cancer, 2—cholera morbus, 1—consumption, 17—convulsions, 4—croup, 3—diarrhœa, 1—diphtheria, 1—dropsy, 1—dropsy of the brain, 3—drowned, 2—dysentery, 2—epilepsy, 1—scarlet fever, 14—typhoid fever, 2—hæmorrhage, 1—disease of the heart, 4—homicide, 1—intemperance, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 12—marasmus, 3—old age, 1—paralysis, 2—peritonitis, 1—premature birth, 2—puerperal disease, 2—purpura hæmorrhagica, 1—pyæmia, 1—rheumatism, 1—unknown, 7—uræmia, 1—whooping cough, 1.

Under 5 years of age, 45—between 5 and 20 years, 10—between 20 and 40 years, 23—between 40 and 60 years, 18—above 60 years, 16. Born in the United States, 74—Ireland, 25—other places, 13.